

APPENDIX 15: EXISTING MONITORING AND POTENTIAL PARTNERSHIP OPPORTUNITIES FOR NETWORK PARKS

Extensive reviews of existing monitoring programs both occurring within the NCBN parks, locally or regionally in relation to the parks, was conducted by Network staff and cooperators in order to better understand what has historically been done and what is currently or recently been monitored in and around the coastal parks. The results of these reviews from network cooperators and staff, were compiled into one summary table (see below). The full documents can be found as the following appendices:

[Appendix 1](#)--CACO Conceptual Framework_Roman_Apr 1999

[Appendix 6](#)--NCBN Phase I Report_Oct 2002.

[Appendix 9](#)--Wetlands Water Quality Preliminary Report_JamesPirri_May 2003

[Appendix 10](#)--Estuarine Nutrients Report_Neckles_Sep 2002

[Appendix 14](#)--Vital Signs Workshop Report_Apr 2000

[Appendix 16](#)--CACO Salt Marsh Nekton Protocol_Raposa_Dec 2001

[Appendix 17](#)--CACO Salt Marsh Vegetation Protocol_Roman_Dec 2001

[Appendix 18](#)--Geomorphology Workshop Report_Duffy_Oct 2002.

[Appendix 19](#)--Inventory Study Plan_Stevens_2002

[Appendix 20](#)--Review of Vertebrate Monitoring_Fabre_Jan 2003

[Appendix 21](#)--Visitor Impact Phase I_Monz_Mar 2003

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Program	ASIS	CACO	COLO	FIIS	GATE	GEWA	SAHI	THST	Organization	Website	Comments
National Land Cover Data	C	C	C	C	C	C	C	C	USGS, EPA (USFS, NOAA) - Multi-Resolution Land Characteristics Consortium	http://www.epa.gov/mrlc/data.html	Every 10 years for entire U.S.. 1991 data is available, but being accuracy checked by EPA. 2001 data collected via the USGS National Land Cover Characterization using Landsat 7 ETM+ data. Target date for availability of 2001 data is 2004.
Land use and land cover data	C	C	C	C	C	C	C	C	NOAA Coastal Remote Sensing Program	http://www.csc.noaa.gov/crs/ccap_index.html	The remote sensing activities at NOAA were combined into one program, the Coastal Remote Sensing Program (CRS). This program includes the former Coastal Change Analysis Program (C-CAP) and the former Coastal Remote Sensing Program.
Estuarine tide/water level	C								NPS		Network of 3 guages. Since1998.
Island geomorphology	C								NPS		Includes development of LIDAR data, beach profile transect surveys, and shoreline change monitoring. Since1995.
National Wetlands Inventory	C	C	C	C	C	C	C	C	USFWS	http://wetlands.fws.gov/	1:24,000 scale digital map data, from aerial photography dated 1970's – 1990's. Products available for network parks: <i>Large Scale Digital Maps (NAD 27)</i> : ASIS, COLO, FIIS, GATE, GEWA, SAHI, THST; <i>Updated Digital Maps (NAD 83)</i> : CACO.
Water stage in streams that drain into Great South Bay				C?					United States Geologic Survey		

Program	ASIS	CACO	COLO	FIIS	GATE	GEWA	SAHI	THST	Organization	Website	Comments
Coastal 2000/ Environmental Monitoring and Assessment Program (EMAP)	C		C			C		C	EPA	http://www.epa.gov/emap/	Current throughout coastal areas in U.S. "EMAP's goal is to develop the scientific understanding for translating environmental monitoring data from multiple spatial and temporal scales into assessments of current ecological condition and forecasts of future risks to our natural resources" (from website)
Water Quality - chemical, physical, human health										-	
Coastal water quality volunteer monitoring.	C								Maryland Coastal Bays Program, EPA National Estuaries Program, Maryland Department of Natural Resources.	http://www.epa.gov/owow/estuaries/programs/mcb.htm	Maryland Coastal Bays Program volunteers at 30 sites. Fewer parameters are monitored compared to the other water quality monitoring efforts in and around Assateague.
Estuarine water quality	C								Maryland Department of Natural Resources, NPS.	http://mddnr.chesapeakebay.net/eyesonthebay/index.cfm	20 parameters measured monthly at 18 stations, and 3 stations record data on 6 parameters hourly. NPS has worked in the 3 bays around ASIS since 1987. As of 1999 a 4th Bay to the north of ASIS was added and the program became a collaborative effort with the State of Md. as part of the Md. Coastal Bays Program.
Bathing beach water quality	C								NPS	-	2 lifeguarded beaches during summer months. Bacteriological, temp, salinity.
Chesapeake Bay water quality monitoring			C			C?			Chesapeake Bay Monitoring Program - EPA, State of Virginia, State of Maryland.	http://www.chesapeakebay.net/mo-nprgms.htm	Since 1984. 19 physical, chemical and biological characteristics are monitored 20 times a year in the mainstem and many tributaries at 165 stations.

Program	ASIS	CACO	COLO	FILS	GATE	GEWA	SAHI	THST	Organization	Website	Comments
Chesapeake Bay water quality monitoring - Virginia			C						Chesapeake Bay Program partnership, Virginia Department of Environmental Quality	http://www.deq.state.va.us/bay/cbpm.html	"There are five fall line, 34 tidal tributary and 27 main Bay stations. The tributary stations are sampled monthly. The main Bay stations are sampled monthly September through June, and twice per month in July and August. Fall line stations are sampled twice monthly on a routine basis and intensively during high riverflow events. Measurements include secchi depth, temperature, salinity, chlorophyll, dissolved oxygen, nitrogen, phosphorus, carbon and silica." (from website)
Volunteer monitoring program - Chesapeake Bay tributary water quality			C			C			Alliance for the Chesapeake Bay	http://www.acb-online.org/project.cfm?vid=87	"The Alliance Citizen Monitoring program is a regional network of trained volunteers who perform weekly water quality tests... across the Chesapeake region in Pennsylvania, Maryland and Virginia..." (from website). At Pope's Creek in GEWA 1 station sampled weekly during the summer for 4 parameters since 1991
Water quality of lower York and James Rivers			C						VA Department of Environmental Quality	http://www.deq.state.va.us/water/monitoring.html	Data on many parameters collected at least 6 times annually. Not a park-specific program. Sampling just outside Park boundary.
Pope's Creek water quality						C			VA Department of Environmental Quality	http://www.deq.state.va.us/water/monitoring.html	1 station monitored 6 times annually for at least 13 water quality parameters - for Clean Water Act compliance since 1997
Groundwater input and nitrate concentration		C							NPS		Seasonally at 10 sites as part of the prototype monitoring program development

Program	ASIS	CACO	COLO	FILS	GATE	GEWA	SAHI	THST	Organization	Website	Comments
Water quality monitoring assessment		C							NPS		4 parameters sampled monthly at numerous sites, as part of the prototype monitoring program development
<i>E. coli</i> for public drinking waters			C?						?		
Estuarine water quality				C					Suffolk County Department of Health Services, Bureau of Marine Resources		Data on multiple parameters collected at 20 stations within, or in close proximity to Fire Island. Bi-weekly May to Sept., and monthly October-April.
Water quality sampling at Fire Island ocean side				C					EPA		1-2 sampling efforts each summer. NPS is not currently a partner.
Swimming beaches bacteriological testing				H					NPS		Until 2001. NPS collected samples, Suffolk County did testing. Total and fecal coliform. Possible that adjacent private communities on bay and ocean side beaches are continuing program. Has been discontinued pending partnering with EPA for their data.
Water quality for human health					C				NPS?		Total/fecal coliform and six other parameters from 30 sites
Sediment contamination levels (dredging impacts)					?				NPS Partner / CESU?		
Subaqueous borrow pit dredge disposal					?						
Permanent automated water quality monitoring					C P ?				NPS?		Three stations, for 4-5 parameters, were scheduled to begin collecting data in Jamaica Bay in 2002

Program	ASIS	CACO	COLO	FILS	GATE	GEWA	SAHI	THST	Organization	Website	Comments
SPDES permits for point source discharges into Jamaica Bay.					C				New York State Department of Environmental Conservation	http://www.dec.state.ny.us/website/dcs/spdes/index.html	SPDES permits are issued by New York in lieu of EPA National Pollution Discharge Elimination System (NPDES) permits.
Water quality in NY/NJ Harbor and Long Island Sound					C				Interstate Environmental Commission (IEC)	http://www.iec-nynjct.org/default.htm	At least 10 parameters. Bi-weekly in the Summer and monthly the rest of the year at 67 stations (33 long term) in NY/NJ Harbor and Long Island Sound, including within the Park.
Water quality in New York City waters					C				New York City Department of Environmental Protection		Data on 6 parameters collected weekly mid-May through mid-September at 8 stations in Jamaica Bay, and one at Hudson River Narrows
Water Quality in New York / New Jersey Harbor estuary.					C				EPA National Estuary Program	http://www.epa.gov/owow/estuaries/	
James J. Howard Marine Sciences Laboratory Hudson-Raritan Estuary Survey					R				National Marine Fisheries Service, State of NJ	sh.nefsc.noaa.gov	
Water quality monitoring							C		Friends of the Bay		2 stations in Cold Spring Harbor monitored weekly for 5 parameters May through October
Water Quality / Aquatic Habitat - biotic											
Submerged Aquatic Vegetation in Chesapeake Bay and Delmarva Peninsula coastal bays.	C		C			C		C	Virginia Institute of Marine Science	http://www.vims.edu/bio/sav/	Since 1984. Annual distribution and biomass data collection since 1997. Principal Investigator Robert C. Orth.

Program	ASIS	CACO	COLO	FILS	GATE	GEWA	SAHI	THST	Organization	Website	Comments
Nekton monitoring	C							?	Maryland Dept. of Nat. Resources	http://www.dnr.state.md.us/	
Harmful / nuisance phytoplankton blooms in Chesapeake Bay and associated waterways - Maryland	C								Maryland Dept. of Nat. Resources (DNR), NPS	http://mddnr.chesapeakebay.net/eyesonthebay/index.cfm	"Since 1985...monitor algal density and distribution throughout the year in the mainstem of the Bay, its tributaries and embayments... Through the Md. Coastal Bays National Estuary Program... The data collected by the NPS is available to the public through Eyes on the Bay." (from websites)
Macroalgae in Maryland waters	C								Maryland Dept. of Nat. Resources, NPS	http://www.dnr.state.md.us/	See following site for summary of presentation of macroalgae sampling methods in Maryland: http://216.239.37.104/custom?q=cache:tCcR9WPjJk8J:www.dnr.state.md.us/coastalbays/res_protect/pubs// NPS assists sampling
Estuarine Nekton		P							NPS, Partners		Next phase of Cape Cod Prototype program
Estuarine Benthic Macrofauna		P							NPS, Partners		Next phase of Cape Cod Prototype program
Pytoplankton in Chesapeake Bay via remote sensing			C			C		C	NOAA Chesapeake Bay ODAS Monitoring Program	http://noaa.chesapeakebay.net/odas_sas.html	Monitors changes in phytoplankton biomass using remote sensing since 1989 with the goal of recovering concentrations of chlorophyll using measurements of ocean color from aircraft.
Chesapeake Bay Plankton Monitoring			C			C		C	Chesapeake Bay Program partnership, State of Maryland, Virginia Department of Environmental Quality	http://www.deq.state.va.us/bay/cbpmon.html	Occurs throughout Chesapeake Bay and tributaries in Virginia and Maryland

Program	ASIS	CACO	COLO	FILS	GATE	GEWA	SAHI	THST	Organization	Website	Comments
Chesapeake Bay Benthic fauna Monitoring			C			C		C	Chesapeake Bay Program partnership, State of Maryland, Virginia Department of Environmental Quality	http://www.chesapeakebay.net/info/lrmon2.cfm	Occurs throughout Chesapeake Bay and tributaries in Virginia and Maryland
Harmful / nuisance phytoplankton blooms in Chesapeake Bay - Virginia			C			C			VA Chesapeake Bay Program	http://www.deq.state.va.us/bay/cbpmon.html	since 1985
Ambient toxics in James River sediment and benthos			C						Chesapeake Bay Program partnership, Virginia Department of Environmental Quality	http://www.deq.state.va.us/bay/cbpmon.html	"(since) 2000 in the Tidal James River from Jamestown Island to the I-95 bridge in Richmond. Monitoring includes: the simultaneous assessment of river mud for chemical contaminants, evaluation for toxicity from chemical contaminants that may be present, and screening of the bottom dwelling animals." (from website)
Macroalgae species composition and abundance		R							NPS		evaluated during experimental phase of the prototype monitoring program development
Pfiesteria monitoring				C					New York Sea Grant, Southampton University ?		1-3 times in July, since 1999, at 27 stations. Park not currently a partner
Benthic Macroinvertebrates					?				NPS?		Need more information

Program	ASIS	CACO	COLO	FILS	GATE	GEWA	SAHI	THST	Organization	Website	Comments
Bacteriological water quality					C				NPS?		Since 1981, for up to 30 stations since 1997, conducted monthly mid Sept – mid May and weekly mid-May to mid-September. At Sandy Hook and Staten Island Units monitoring is exclusively bacteriological, at Jamaica Bay 8 additional parameters
Hudson River estuary tidal wetland mapping,				C	C		C		Hudson River Estuary Program, States of New York and New Jersey, EPA	http://www.dec.state.ny.us/website/hudson/hrep.html	
Biological Stream Survey (MBSS) - Potomac and tributaries								R	Maryland Department of Natural Resources	http://www.dnr.state.md.us/stream/mbss/	
National Avian Monitoring Programs											
Breeding Bird Survey		H							USGS and Canadian Wildlife Service	http://www.mp2-pwrc.usgs.gov/bbs	Since 1966; Several BBS currently occur close to CBN parks.
State Breeding Bird Atlas	R	R	R	R	R	R	R	R	National Audubon Society of New York State, Maryland Ornithological Society, Massachusetts Audubon Society, Virginia Society of Ornithology, State of New Jersey	http://www.dec.state.ny.us/website/dfwmr/wildlife/bba/results/index.cfm	BBA's have been completed for MA, NY, MD, VA. Data can usually be accessed through each state's wildlife agency

Program	ASIS	CACO	COLO	FILS	GATE	GEWA	SAHI	THST	Organization	Website	Comments
Monitoring Avian Productivity and Survivorship Program		P			H				The Institute for Bird Populations	http://www.birdpop.org/maps.htm	
The Christmas Bird Count		C	C	C	C	C		C	Audubon Society/USGS	http://www.audubon.org/bird/cbc	Since 1900. USGS posts data to supplement Breeding Bird Survey
Mid-Winter Aerial Surveys									USFWS/Atlantic coastal states environmental agencies		Since 1955; Data can be located through each state wildlife agency
National Wildlife Refuge Waterfowl Surveys	C	C			C				USFWS		
Migration Patterns and Winter Ecology of Tundra Swans									Virginia Department of Game and Inland Fisheries is cooperating with Cornell University and the Atlantic Flyway states of Maryland, Pennsylvania, and North Carolina	http://www.dnr.cornell.edu/research/tundraswan/tswan.html	Since approx. 2000
Seabird and Colonial Waterbird Surveys									USFWS, USGS Patuxent Research Center	: http://www.mp2-pwrc.usgs.gov/cwb/	Implements the North American Waterbird Conservation Plan. Since 1975; Atlases published 1977; 1984-1985; 1994-1996; electronic database available for 1990's surveys
Breeding Bird Census									Cornell Laboratory of Ornithology		Since 1914

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Program	ASIS	CACO	COLO	FILS	GATE	GEWA	SAHI	THST	Organization	Website	Comments
Long-term monitoring Colonial Waterbird	C								Maryland Department of Natural Resources/NPS staff	http://www.dnr.state.md.us/wildlife/	Since 1985
Migrating Waterbirds		P									
Beach-nesting Colonial Waterbird Monitoring		C							NPS		
Surveys of great heron/great egret colonies			R						Virginia Game and Inland Fisheries	http://www.dgif.state.va.us/wildlife/	
Colonial Waterbird Survey				C	C				New York Department of Environmental Conservation	http://www.dec.state.ny.us/website/dfwmr/	Since 1983; Large-scale effort with bi-annual reports issued
Harbor Herons Project					C				New York City Audubon Society/NPS staff	http://www.nycas.org/	Since 1984; Results issued in NYDEC Colonial Waterbird reports
Colonial Waterbird Aerial Surveys				H	H				P.A. Buckley et al/USGS		Aerial Surveys; Five year study in mid 1970's. Results published
Colonial Waterbird Monitoring Program					H				Rutgers University		From 1971-1990
Shorebirds											
Piping Plover Survey Program	C								USFWS	http://pipingplover.fws.gov/links.html	At Chincoteague NWR on Assateague Island

Program	ASIS	CACO	COLO	FIIS	GATE	GEWA	SAHI	THST	Organization	Website	Comments
Piping Plover and other beach-nesting bird species Monitoring Program	C								NPS		ASIS Since 1985. For FIIS, implementing Endangered Species Habitat Management Plan and EA since 1998.
Migratory and Resident Shorebirds Monitoring Program	H								NPS		From 1984-1996
Piping Plover Monitoring Programs	C	C		C	C				NPS		
Shorebird Monitoring Program		C							Wellfleet Audubon Society	http://www.wellfleetbay.org/	
Breeding Colonies Monitoring Program				C	C				New York Department of Environmental Conservation/Nature Conservancy/Audubon Society	http://www.dec.state.ny.us/website/dfwmr/	
Piping plover/Least tern Protection Program				C					NPS, Suffolk County, NY Department of Parks, Recreation		Since 1998; Data issued in an annual report and NYDEC Colonial Waterbird reports
Fall Shorebird Migration Program at Jamaica Bay NWR					H				Rutgers University/NPS		Rutgers-1978-1983; NPS 1981-1988
Shorebird Breeding Success Program at					H				NPS		From 1985-1988

Program	ASIS	CACO	COLO	FILS	GATE	GEWA	SAHI	THST	Organization	Website	Comments
Sandy Hook											
Shorebird Migration Monitoring					H				Manomet Center for Conservation Sciences	http://www.manomet.org/	Between 1970 and 1980
Waterfowl											
Midwinter Aerial Survey and Waterfowl Breeding Surveys	C?								Maryland Dept. of Natural Resources	http://www.dnr.state.md.us/wildlife/	Conducted throughout state; Unknown if still occurring
Mid-winter Waterfowl Survey:		C							Massachusetts Division of Wildlife	http://www.state.ma.us/dfwele/dfw/dfw_toc.htm	
Waterfowl Surveys of the 1960's				H	H				USFWS		Extensive waterfowl data collected by USFWS in Long Island area during this time
Mid-Winter Aerial Surveys				R	R		R		New York Dept. of Environmental Conservation	http://www.dec.state.ny.us/website/dfwmr/	Recently discontinued
Winter Waterfowl Ground Counts at JBNWR					C				New York Federated Bird Clubs		Since 1955; Annual Reports published in Kingbird
Comprehensive Monitoring Study at Wm. Floyd Estate				C					USGS/USFWS/Moriches Bay Audubon Society		Since 1999
Waterfowl Counts at Wm. Floyd Estate				H					Unknown		From 1982-1994
Annual Winter Waterfowl Surveys							C		Theodore Roosevelt Audubon	http://www.audubon.org/affiliate/ny/trs/checklst.htm	Conducted at TRS near SAHI

Program	ASIS	CACO	COLO	FIIS	GATE	GEWA	SAHI	THST	Organization Sanctuary	Website	Comments
Raptors											
Snowy Owl Monitoring		C							Wellfleet Audubon Society/USGS	http://www.massaudubon.org/Birds_&_Beyond/Snowy_Owl/index.html	Since 2001; Satellite telemetry tracks movements on wintering habitat including birds already located on CACO and BOHA
Peregrine falcon Monitoring	C								Department of the Army/		Since 1970's; This work is currently being conducted by a private company
Midwinter Bald Eagle Survey	C								The Snake River Field Station	http://srfs.wr.usgs.gov	See website for state coordinators
Northern Saw-whet owl monitoring	C								Project OwlNet	http://www.projectowl.net/	Since 1990 at ASIS
Pilgrim Heights Hawk Watch		C							Massachusetts Audubon Society's Wellfleet Bay Wildlife Sanctuary/Eastern Massachusetts Hawk Watch	http://www.wellfleetbay.org/	Annually since 1998; Sporadic counts prior to 1998
Bald Eagle Aerial Surveys			C						College of William and Mary's Center for Conservation Biology		Twice during nesting season
Lighthouse Hawk Watch				C					Hawk Migration Association of North America	http://www.hman.org/	Since 1982
Hawk Banding Station				C					Theodore Roosevelt Audubon	http://www.audubon.org/affiliate/ny/trs/checklist.htm	On FIIS adjacent to NPS lands; Historically conducted on NPS land

Program	ASIS	CACO	COLO	FILS	GATE	GEWA	SAHI	THST	Organization	Website	Comments
Salt Marsh and Grassland Monitoring Study		R							Massachusetts Audubon Society	http://www.massaudubon.org/Birds/_&_Beyond/Grassland_Birds/index.html	Grasslands 1997-2000; Salt Marsh 1999-200
Amphibians and Reptiles											
Pond-Breeding Amphibians		R							NPS	http://www.nps.gov/caco/resources/Herps.pdf	
VA Atlas of Amphibians and Reptiles			C			C			Virginia Department of Game and Inland Fisheries	http://www.dgif.state.va.us/wildlife/	
Amphibian and Reptile Atlas Project				R	R		R		New York Department of Environmental Conservation	http://www.dec.state.ny.us/website/dfwmr/	
Aquatic Turtles		P							NPS, Partners		Next phase of Cape Cod Prototype program
Amphibian and Reptile Restoration Monitoring					C				NPS/Wildlife Conservation Society		
Mammals											
Small Mammal Monitoring		P							NPS, Partners		Next phase of Cape Cod Prototype program
Meso-Mammal Monitoring		P							NPS, Partners		Next phase of Cape Cod Prototype program
New York Marine Mammals, Sea Turtles And Sea Birds				C	C		C		State tracking program via Coastal Research and Education Society of Long Island	http://www.cresli.org/	

Program	ASIS	CACO	COLO	FILS	GATE	GEWA	SAHI	THST	Organization	Website	Comments
Feral Horses Population Dynamics	C								NPS		Since 1990
Feral Horse Grazing Effects	C								NPS		Data collected on vegetation monitoring parameters
Sika Deer Hunting Takes	C								NPS		
Small Mammal Research & Monitoring				R					H. Brian Underwood		
White-Tailed Deer Research & Monitoring				C					NPS, H. Brian Underwood		
Marine Mammal Health and Stranding Response Program	C								NMFS, NPS, State of Maryland	http://www.nmfs.noaa.gov/prot_re s/PR2/Health_and_Stranding_Response_Program/mmhsrp.html	Current throughout U.S. waters. Assateague since 1998
Right Whale Surveillance and Monitoring Program Conservation Program		C							Massachusetts Division of Marine Fisheries	http://www.state.ma.us/dfwele/dmf/ProgramsAndProjects/ritwhale.htm	
Fisheries											
Coastal Fisheries and Habitat Research/Monitoring									NMFS	http://www.nos.noaa.gov/websites/supp_nccos.html	Current on eastern seaboard

Program	ASIS	CACO	COLO	FILS	GATE	GEWA	SAHI	THST	Organization	Website	Comments
Coastal 2000/ Environmental Monitoring and Assessment Program (EMAP)	C		C			C		C	EPA	http://www.epa.gov/emap/	Coastal areas in U.S. "EMAP's goal is to... translate environmental monitoring data from multiple spatial and temporal scales into assessments of current ecological condition and forecasts of future risks to our natural resources" (from website)
Northeast Fisheries Science Center									National Marine Fisheries Service	http://www.nefsc.noaa.gov/	Current in Northeastern coastal areas
Ecosystem Monitoring Group of the Northeast Fisheries Science Center									NMFS	http://www.nmfs.noaa.gov/publications.htm/	Current Northeastern coastal areas
National Center for Coastal Monitoring and Assessment and Center for Coastal Fisheries and Habitat Research									NOAA	http://www.nccos.noaa.gov/about/cma.html	Current all U.S. coastal areas
REEF Fish Survey Project		C							NMFS/The Nature Conservancy	http://www.reef.org/data/surveyproject.htm	Current-along U.S. coastal areas, near CACO
Chesapeake Bay Program Benthic Monitoring Program									EPA	http://www.chesapeakebay.net/info/lrmon2.cfm	Occurs in throughout Chesapeake Bay in Virginia and Maryland
Chesapeake Bay Program Fisheries									NOAA	http://www.chesapeakebay.net/info/lrmon2.cfm	Current-rivers near COLO and GEWA

Program	ASIS	CACO	COLO	FILS	GATE	GEWA	SAHI	THST	Organization	Website	Comments
Monitoring											
Finfish and Crustaceans Monitoring				C	C		C		New York Department of Environmental Conservation Bureau of Marine Resources	http://www.dec.state.ny.us/website/dfwmr/marine/index.htm	Current-all NY coastal areas. Bioaccumulation / bioconcentration (landfill leachates and estuarine species)
Virginia Fishery Independent Seine and Trawl Surveys									Virginia Institute of Marine Science	http://www.fisheries.vims.edu/rawlseine/vimspage.htm	Current-rivers near COLO
Maryland Coastal Bays Environmental Monitoring Program and Fish Population Monitoring Project									Maryland Department of Natural Resources	http://www.dnr.state.md.us/bay/czm/coastal_bays_01.pdf	Current coastal and estuarine waters of ASIS
Fish kills in Maryland waters	C							C	MD Dept. of the Environment	http://www.mde.state.md.us/Programs/MultimediaPrograms/environment/emergencies/FishKills_MD/index.asp	"The Maryland Department of the Environment is mandated by Environmental Article Section 4-405 (c) to oversee the investigation of fish kill incidents throughout the state" (from website)
Juvenile fish and Blue Crab Trawl Survey			H?						Virginia Institute of Marine Science	http://www.vims.edu/	Since 1955.
Jamaica Bay Fisheries Survey					C				NPS, USFWS		Approximately monthly since 1985, including otter trawl, gill net, and beach seine sites.

Program	ASIS	CACO	COLO	FILS	GATE	GEWA	SAHI	THST	Organization	Website	Comments
Hudson River estuary tidal wetland mapping,				C	C		C		Hudson River Estuary Program, States of New York and New Jersey, EPA	http://www.dec.state.ny.us/website/hudson/hrep.html	
James J. Howard Marine Sciences Laboratory Hudson-Raritan Estuary Survey					R				NMFS/ State of NJ	sh.nefsc.noaa.gov	
Biological Stream Survey (MBSS)								R	Maryland Department of Natural Resources	http://www.dnr.state.md.us/stream/mbss/	
Estuarine Nekton		P							NPS, Partners		Next phase of Cape Cod Prototype program
Estuarine Benthic Macrofauna		P							NPS, Partners		Next phase of Cape Cod Prototype program
Freshwater Fish Monitoring		C							?University of Massachusetts-Amherst		
Invertebrates											
Beach Macroinvertebrates		P									Next phase of Cape Cod Prototype program
Freshwater Aquatic Invertebrates		P									Next phase of Cape Cod Prototype program
Mussel Watch Program									EPA		Historical-most likely at GATE and other CBN parks

Program	ASIS	CACO	COLO	FIIS	GATE	GEWA	SAHI	THST	Organization	Website	Comments
Mussel and Oyster Watch Project	C	C	C	C	C		C		NOAA	http://ccmaserver.nos.noaa.gov/NSandT/New_NSandT.html	Also located near CACO, COLO, FIIS, GEWA, ASIS and SAHI
Mosquito borne diseases	C								NPS, State of MD, Worcester County.		Eastern Equine Encephalitis and West Nile Virus. Since 1991
Mosquito monitoring for Eastern Equine Encephalitis and West Nile Virus				C					NPS, Suffolk County Department of Health Services		Since 1998, following Park-specific mosquito surveillance and monitoring protocols - a pilot program for the NPS. Samples collected May - September, sent to Suffolk County Health Dept. for analysis.
Gypsy moth			?						?		Clarification needed.
Southern Pine Bark Beetle			?						?		Clarification needed.
Vegetation											
Salt Marsh Vegetation		C							University of Rhode Island		
Cover-type Vegetation Mapping	C	C	C	C	C	C	C	C	NPS		
Pond Vegetation		P							NPS, Partners		Next phase of Cape Cod Prototype program
Dune Grassland Vegetation		P							NPS, Partners		Next phase of Cape Cod Prototype program
Coastal Heathlands		P							NPS, Partners		Next phase of Cape Cod Prototype program
Coastal Forests		P							NPS, Partners		Next phase of Cape Cod Prototype program
Seabeach amaranth	C								NPS		Since 1998. Census of all available habitat.

Program	ASIS	CACO	COLO	FILS	GATE	GEWA	SAHI	THST	Organization	Website	Comments
Seabeach amaranth and seabeach knotweed				C					NPS		Management-based monitoring associated with 1998 Endangered Species Management Plan.
Rare plant monitoring					?				NPS?		
Interdisciplinary Project - Based Monitoring											
Comprehensive Monitoring Program at William Floyd Estate				C					USGS/USFWS/Moriches Bay Audubon		includes water table and salinity level monitoring , determining vegetation characteristic, invertebrate surveys, waterfowl surveys and fish surveys
Assateague North End restoration project monitoring	C								NPS		Since 1996. This long term restoration project is adding sediment annually, and conducting monitoring of both biotic (including vegetation) and physical features.